What is claimed is:

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1. An apparatus for producing an organic EL display device which has at least a lower electrode, an organic luminescence medium and an upper electrode, the periphery of the device being sealed with a sealing member,

the apparatus comprising:

a first unit for carrying the supporting substrate in,

a second unit for heating at least the supporting substrate before forming the organic luminescence medium, thereby conducting a dehydration treatment,

a third unit for forming the organic luminescence medium and the upper electrode, and

a fourth unit for sealing the periphery with the sealing member, and

carrying units being set up between the respective units.

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2. The organic EL display device producing apparatus according to claim 1, wherein the first unit is arranged between the second unit and the third unit.

3. The organic EL display device producing apparatus according to claim 1, wherein the second unit is composed of a heating room and a cooling room.

4. The organic EL display device producing apparatus according to claim 1, wherein the second unit is provided with at least one of an inert gas circulating device, a pressure-reducing device, and a cooling device.

5. The organic EL display device producing apparatus according to claim 1, wherein the first unit is provided with at least one of an inert gas circulating device, a pressure-reducing device, and a cooling device.

6. The organic EL display device producing apparatus according to claim 1, wherein the fourth unit is connected to the first unit.

7. The organic EL display device producing apparatus according to claim 1, wherein the second unit is made in common with the fourth unit.

8. The organic EL display device producing apparatus according to claim 1, wherein the third unit is a vacuum evaporation device having plural evaporation sources for evaporating plural samples simultaneously or successively.

9. The organic EL display device producing apparatus according to claim 1, wherein the third unit comprises a buffer room, a vacuum evaporation device, and a sputtering device.

10. The organic EL display device producing apparatus according to claim 1, wherein the third unit further comprises a plasma-cleaning device.

11. A process for producing an organic EL display device, using the organic EL display device producing apparatus according to claim 1, comprising the steps of:

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carrying a supporting substrate into the first unit,

using the carrying device to transfer the carried-in supporting substrate from the first unit to the second unit,

heating the transferred supporting substrate in the second unit to conduct a dehydrating treatment,

using the carrying device to transfer the dehydrated supporting substrate from the second unit to the third unit,

forming an organic luminescence medium and an upper electrode in the third unit,

using the carrying device to transfer the supporting substrate on which the organic luminescence medium and the upper electrode are formed from the third unit to the fourth unit, and

sealing the periphery of the organic EL display device with a sealing member in the fourth unit.

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12. The organic EL display device producing process according to claim 11, wherein the second unit comprises a heating room and a cooling room, the supporting substrate is heated in the heating room to conduct a dehydrating treatment, and the dehydrated supporting substrate is cooled in the cooling room.

13. A process for producing an organic EL display device, using the organic EL display device producing apparatus according to claim 2, comprising the steps of:

carrying a supporting substrate into the first unit,

using the carrying device to transfer the carried-in supporting substrate from the first unit to the second unit,

heating the transferred supporting substrate in the second unit to conduct a dehydrating treatment,

using the carrying device to transfer the dehydrated supporting substrate from the second unit to the third unit through the first unit,

forming an organic luminescence medium and an upper electrode in the third unit,

using the carrying device to transfer the supporting substrate on which the organic luminescence medium and the upper electrode are formed from the third unit to the fourth unit via the first unit, and

sealing the periphery of the organic EL display device with a sealing member in the fourth unit.

14. A process for producing an organic EL display device, using the organic EL display device producing apparatus according to claim 6, comprising the steps of:

carrying a supporting substrate into the first unit,

using the carrying device to transfer the carried-in supporting substrate from the first unit to the second unit,

heating the transferred supporting substrate in the second unit to conduct a dehydrating treatment,

using the carrying device to transfer the dehydrated supporting substrate from the second unit to the third unit through the first unit,

forming an organic luminescence medium and an upper electrode in the third unit,

using the carrying device to transfer the supporting substrate on which the organic luminescence medium and the upper electrode are formed from the third unit to the fourth unit, and

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sealing the periphery of the organic EL display device with a sealing member in the fourth unit.

15. A process for producing an organic EL display device, using the organic EL display device producing apparatus according to claim 7, comprising the steps of:

carrying a supporting substrate into the first unit,

using the carrying device to transfer the carried-in supporting substrate from the first unit to the second unit,

heating the transferred supporting substrate in the second unit to conduct a dehydrating treatment,

using the carrying device to transfer the dehydrated supporting substrate from the second unit to the third unit,

forming an organic luminescence medium and an upper electrode in the third unit,

using the carrying device to transfer the supporting substrate on which the organic luminescence medium and the upper electrode are formed from the third unit to the fourth unit which is in common with the second unit through the first unit, and

sealing the periphery of the organic EL display device with a sealing member in the fourth unit.

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16. The organic EL display device producing process according to claim 11, wherein the supporting substrate dehydrated in the second unit is transferred to the first unit and cooled, and subsequently the supporting substrate is transferred to the third unit.

17. The organic EL display device producing process

according to claim 11, wherein the organic luminescence medium is formed in the third unit; the supporting substrate on which the organic luminescence medium is formed is then transferred to the second unit to conduct the dehydrating treatment; and subsequently the supporting substrate is again transferred to the third unit to form the upper electrode.

18. The organic EL display device producing process according to claim 11, wherein the water content in the organic luminescence medium after the sealing with sealing member is performed is set to 0.05% or less by weight.

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